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ZOOLOGICAL SERIES
OF
FIELD MUSEUM OF NATURAL HISTORY

Volume 29

CHICAGO, JULY 12, 1944

No. 13

NINE NEW SOUTH AMERICAN RODENTS

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Collections of mammals recently made in southern and eastern Peru include several surprisingly distinct forms and some minor subspecies not as yet recognized. Most of the rodents among these are characterized below, together with several from other parts of South America.

Sciurus sanborni sp. nov.

Type from La Pampa, between Rio Inambari and Rio Tambopata, about twenty miles north of Santo Domingo, Madre de Dios, Peru. Altitude about 1,900 feet. No. 52611 Field Museum of Natural History. Subadult female. Collected October 23, 1941, by Colin C. Sanborn. Orig. No. 2979.

Characters.—A small, soft-pelaged squirrel of general olivaceous brown coloration with conspicuous pure white postauricular spots and mainly white under parts. Head, back, sides and upper sides of feet a finely speckled mixture producing a general effect closely approximating the Mummy Brown of Ridgway; outer side of ears Mummy Brown anteriorly, Tawny-Ochraceous distally and white at the posterior base continuous with postauricular white, the entire white area slightly greater than the combined brown and ochraceous areas; a narrow light eye-ring, ochraceous above and white elsewhere; sides of nose ochraceous to base of whiskers; tail with hairs tipped with Ochraceous-Buff and broadly black subterminally. Chin, middle of throat, and inner sides of forelegs white to roots of hairs; chest and abdomen creamy white, the hairs with dark bases and tips irregularly washed with Ochraceous-Buff; light color of under parts extending down inner sides of hind legs nearly or quite to foot.

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191

Skull narrow and anteriorly depressed, the rostral part with evenly sloping sides without the usual pinched-in effect; nasals short; postorbital processes short and weak, ending about on level of last molar; anterior edge of maxillary root of zygoma not continuous with outer edge of ascending premaxilla, which is rounded instead of angular; palate rather wide and evenly convex without trace of a median ridge; audital bullae relatively large, slightly greater in actual size than in *S. aestuans*. Incisor teeth very slender and weak, the upper ones very short; third upper premolar absent; fourth upper premolar small, less than one-third the size of molar one; second upper molar with metastyle somewhat more evident than in *S. ignitus*, more nearly as in *S. aestuans*.

Measurements.—Type, measured by the collector: total length 345; tail 170; hind foot 50. Skull of type: greatest length 42.3; basilar length 32.3; zygomatic breadth 23.9; breadth of braincase 21.1; interorbital breadth 13.9; breadth between tips of postorbital processes 19; median length of nasals 9.3; diastema 10.8; width of palate between inner bases of premolars 6.9; upper toothrow 6.9; length of exposed front surface of upper incisors 5; antero-posterior width of upper incisor 1.3.

Remarks.—Although only one specimen of this squirrel is at hand, it differs so widely from all heretofore known species that its distinctness is scarcely to be doubted. Indeed, if one were to follow the standards that have been applied to supposed generic distinctions among American Sciuridae it would be necessary to give it a new generic as well as specific name. Judged by its skull it would have to stand alone since this does not conform with that of any previously known species. It is perhaps nearest to *S. ignitus* although it differs from that almost as much as from *aestuans* and others referred to the genus or subgenus *Guerlinguetus*.

Externally its large conspicuous white postauricular spots are distinctive. The narrow skull with depressed rostrum and weak incisors, as well as numerous minor characters, seems to be unique.

Although the type is a female, the number of mammae is not evident.

***Oryzomys xantheolus ica* subsp. nov.**

Type from Hacienda San Jacinto, near Ica, Province of Ica, southwestern Peru. No. 53157 Field Museum of Natural History. Adult female. Collected January 17, 1942, by Colin C. Sanborn.

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Characters.—Similar in color and general characters to *O. x. xanthaeolus* but somewhat larger and having a skull with definitely larger audital bullae.

Measurements.—Type, measured by the collector: total length 325; tail 161; hind foot 33. Skull of type: greatest length 44.8; zygomatic breadth 19.3; breadth of braincase 13.5; interorbital space 6.1; nasals 14.3×4.5 ; diastema 8.5; palatine foramina 7.3; upper toothrow 5.5.

Remarks.—This is a very slight form characterized mainly by relatively large audital bullae. Only two specimens representing it are in hand but they are not approached in a very large series of typical *xanthaeolus* from various localities throughout a range extending from Pacasmayo to the vicinity of Lima.

Phyllotis phaeus sp. nov.

Type from Limbani, Puno, Inambari drainage, Peru. Altitude about 9,000 feet. No. 53177 Field Museum of Natural History. Collected February 23, 1942, by Colin C. Sanborn. Orig. No. 3084.

Characters.—A very dark-colored, small-eared and long-tailed *Phyllotis* differing from both the *lutescens-andium* group and the *darwinii* group in color and cranial characters. Color of upper parts varying from Fuscous or Dusky Drab to Blackish Brown, the median upper parts frequently almost clear Blackish Brown; under parts ranging from pale buffy white with an extensive Cinnamon Rufous pectoral area to wholly dull brownish (near Dusky Drab) scarcely paler than sides; ears dusky; feet whitish or with slight dusky mixture; tail well pencilled and blackish above but variable below, blackish all around in its distal third or half and whitish proximally with a narrow median line of dusky extending nearly or quite to its base. Skull with the interorbital region narrowed and its edges elevated to form rather definite ridges (not beads) bounding a central depression; interpterygoid fossa relatively wide and extended forward quite to the level of the posterior edge of the last molar; audital bullae moderate to small, somewhat less than in *P. d. osilae* and others of the *darwinii* series; otherwise the skull is not peculiar.

Measurements.—Average of six adult topotypes: total length 257 (245–270); tail 136 (128–140); hind foot 28.3 (27–30). Skull of type: greatest length 30; basilar length 23.7; zygomatic breadth 15.9; breadth of braincase 14; interorbital constriction 4.3; nasals 10.2×3.8 ; diastema 7.2; least width of zygomatic plate 2.9; palatine slits 6.9; upper toothrow 5.2.

Remarks.—This appears to be a species distinct from any previously described although the genus to which it belongs is one in which numerous names have been given and specific relationships are still somewhat confused. Its small ears, very dark color, and slight but constant cranial characters are not approached in any of the various forms of the *darwini* series and it is much too large to be easily connected with *andium* or any of its possible relatives.

Examination of types and considerable other material in the British Museum followed by further study of very large series now in Field Museum leads to the tentative conclusion that most of the names applied to central Andean *Phyllotis* can be assigned to one or the other of two distinct but often superficially similar species, each with various subspecies. One of these (*darwini*) is mainly larger and southern, while the other ("*andium*") is smaller and northern. In southern Peru, Bolivia, and northwestern Argentina the two overlap and in numerous localities there are representatives of both living nearly or quite side by side but fully distinct from each other.

Thomas in 1919 (*Ann. Mag. Nat. Hist.*, (9), 3, pp. 492–494) found the two in a collection from Rioja, Argentina, and was led to state that "the occurrence of these two closely allied Pericotes in the same locality is very remarkable," but he failed to connect them with their respective relatives elsewhere. Even now there is such variation within each group and so many regions are still unrepresented that a wholly satisfactory allocation of forms is probably something for the future. The possibility of hybridism in some localities is suggested.

It seems fairly certain that the subspecies of *darwini* will include *darwini*, *vaccarum*, *rupestris*, *wolffsohni*, *osilae*, and *limatus*. Possibly *posticalis* can be recognized, with *abrocodon* as synonym, but its distinction from *osilae* is very slight at best. Most of the specimens referred by Thomas to his *ricardulus* probably should be called *rupestris*, but the type of *ricardulus* approaches *wolffsohni* at least in color if not in skull characters, suggesting that it may be an intermediate without well-defined range. The very large forms *magister* and *nogalaris* perhaps should be held in abeyance, but very large specimens agreeing with them have been received from several localities with series otherwise of normal size.

The earliest member of the smaller group to be named is *lutescens*, of which *tucumanus* appears to be a synonym, while *arenarius* and *andium* are with little doubt subspecies. Specimens recorded by

Thomas from the Cuzco region of Peru (Proc. U. S. Nat. Mus., 58, p. 230, 1920) as *posticalis* and noted as somewhat aberrant probably include both "*posticalis*" and *andium*.

The species occurring at Limbani is represented by nine specimens showing two phases of coloration. Five of them are very dark, with the under parts wholly washed with brown. Three others are somewhat lighter above and the under parts are buffy whitish with a large pectoral area clear Cinnamon Rufous. All but two have the under side of the tail with a narrow sooty median line. Such a tail marking has otherwise been found in *Oryzomys l. magellanicus* and occasionally in *O. l. philippii* of southern Chile. It appears also in *Andinomys edax lineicaudatus*.

Akodon boliviensis subfuscus subsp. nov.

Type from Limbani, Puno, Inambari drainage, Peru. Altitude about 9,000 feet. No. 52558 Field Museum of Natural History. Adult male. Collected September 29, 1941, by Colin C. Sanborn. Orig. No. 2881.

Characters.—Similar to *A. b. boliviensis* in size and cranial characters, but color of upper parts darker throughout with considerable mixture of blackish; general color Bone Brown or Clove Brown rather than Buffy Brown or Olive Brown.

Measurements.—Average of ten topotypes: total length 170 (160–180); tail 71 (62–82); hind foot 21.5 (20–23). Skull of type: greatest length 25.3; basilar length 19.2; zygomatic breadth 12.3; breadth of braincase 11.1; interorbital breadth 4.5; nasals 8.8; palatine slits 5.2; upper toothrow 3.8.

Remarks.—This is a very slight form, differing from typical *boliviensis* only in darker color. In this it conforms to a tendency shown by various other mammals from the same locality. Most of these are known only from Limbani and its immediate vicinity but the region directly north and south of this locality is so far scarcely represented by specimens and it is probable that some or all of them may have a considerable range. Two specimens from Yungas del Palmar, Cochabamba, Bolivia, which are even darker than those from Limbani, especially on the under parts and tail, probably should be referred here.

Writing of *Akodon boliviensis* in 1902 (Ann. Mag. Nat. Hist., (7), 9, p. 136), Thomas stated that it "can probably never be determined with certainty, as the type is quite young, and might be any one of several different forms." However, a series now in Field Museum

was recently collected by Sanborn at approximately the exact type locality where it was found to be the most common small rodent. Agreement with the description and figure of the type is conclusive and there seems no further reason to doubt the identity of the species to which the name should be applied. Especial effort was made to settle the matter, since *boliviensis* is the type of the genus *Akodon*. The species is the one to which the name has usually been referred, a small form, olive brown in color, with the under parts generally clear Ochraceous-Tawny. It has been taken at high altitudes throughout most of southern Peru and probably extends into Bolivia. More than fifty specimens are now in Field Museum. Closely allied to it, perhaps no more than subspecifically separable, are *spgazzinii*, *tucumanensis* and *alterus* of northwestern Argentina. *A. lutescens*, from Tirapata, Peru, is quite within its range and perhaps is a synonym. Some specimens from the Cuzco region are a little paler beneath than typical, but others are not, so this probably is not significant. The species has not been taken north of the Cuzco region.

***Akodon andinus polius* subsp. nov.**

Type from Salinas, Arequipa, Peru. Altitude 14,000 feet. No. 49563 Field Museum of Natural History. Adult female. Collected October 6, 1939, by John M. Schmidt. Orig. No. 180.

Characters.—Similar to *A. a. andinus* and *A. a. dolichonyx*, but general color olivaceous gray rather than cinnamomeous; under parts Pinkish Buff instead of Cinnamon Buff; feet whitish rather than buffy. Skull not peculiar.

Measurements.—Average of three topotypes: total length 141 (135–149); tail 52 (51–54); hind foot 20.3 (20–21). Skull of type: greatest length 23; zygomatic breadth 11.8; interorbital breadth 4.2; breadth of braincase 11.6; palatine slits 4.4; upper cheekteeth 3.5.

Remarks.—*A. a. andinus* and *A. a. dolichonyx* are essentially rufescent or cinnamomeous in general color, whereas this northern race is duller and more grayish. It differs from *andinus* and *dolichonyx* rather more than they do from each other. Available specimens of *andinus* seem to be a little darker than *dolichonyx* but the distinction is very slight and perhaps better material will make it necessary to throw the two together.

The present form furnishes considerable extension of range for the species, which is a very distinct one confined to very high altitudes from central Chile northward to southwestern Peru and

extending into northwestern Argentina. It should be found also in some parts of Bolivia but so far has not been recorded from there. A specimen from Choquelimpie, Tacna, seems to fall with *polius* rather than with *dolichonyx* to which it was recently tentatively referred. Besides three specimens from the type locality, four from Caylloma and four from Sumbay, Peru, have been examined.

***Oxymycterus paramensis nigrifrons* subsp. nov.**

Type from Limbani, Puno, Inambari drainage, Peru. Altitude about 9,000 feet. No. 52629 Field Museum of Natural History. Adult female. Collected September 29, 1941, by Colin C. Sanborn. Orig. No. 2878.

Characters.—Similar to *O. paramensis paramensis*, but somewhat larger, darker, and more uniformly colored; upper parts and sides rich reddish brown approximately Brussels Brown, the head and shoulders scarcely or not at all different from other parts; under parts clear Ochraceous-Tawny, several shades darker than the Ochraceous-Buff of *paramensis*; a sharply marked blackish brown frontal spot extending back from rhinarium about 10 mm.; feet mixed blackish and pale drab, the lighter color predominating; tail bicolored. Skull with narrower zygomatic plate and nasals more expanded anteriorly than in *paramensis*; palatal bridge averaging shorter.

Measurements.—Average of eight adult topotypes: total length 235 (218–245); tail 90 (80–96); hind foot 30 (29–31). Skull of type and (in parentheses) of an average example of *paramensis*: greatest length 32.7 (32.3); basilar length 24.3 (23.8); zygomatic breadth 14.3 (14.6); breadth of braincase 14 (13.5); interorbital constriction 6.3 (6); nasals 13.2 (11.5); diastema 7 (7); basal width of zygomatic plate 2.1 (2.9); palatal bridge 4.2 (4.3); palatine slits 6.4 (6.3); upper toothrow 5 (4.9).

Remarks.—The series (20) representing this form is in slightly worn pelage causing some darkening on the head in one or two specimens, but the general coloration is very uniform from head to base of tail. In this uniformity of coloration and in size there is fairly close similarity to *O. nasutus* of Uruguay and it is perhaps not impossible that this and other forms of *paramensis* may have connection with that species. The narrow zygomatic plate and rather short palate also favor the same assumption, but the skull of *nasutus* differs rather markedly in its narrow interorbital space and its high narrow braincase.

The somewhat elongated supranarial blackish spot is uniformly present and has not been found in any other form examined except in very incipient form.

The much larger species *juliacae*, probably allied to *O. inca*, was taken by Mr. Sanborn at Sagrario somewhat north of Limbani and at a lower altitude.

Specimens from Ollantaytambo and Chospycoc (10,000–13,000 ft.), Peru, which have been lent by the United States National Museum, show no approach to this form but, as stated by Thomas (Proc. U. S. Nat. Mus., 58, p. 239, 1920), are essentially like typical *paramensis*.

***Proechimys cayennensis arescens* subsp. nov.**

Type from Roca, near Fazenda Inhuma, below Santa Philomena, upper Rio Parnahyba, Maranhão, Brazil. No. 26441 Field Museum of Natural History. Adult male. Collected August 5, 1925, by Heinrich E. Sneathlage.

Characters.—Similar in general to *P. cayennensis cayennensis*, but coloration much paler throughout; upper parts with dark mixture pale brownish rather than blackish; general color pale cinnamon, clearest on the sides; under parts creamy white; feet white, the metatarsal joint pale brownish; tail brownish drab above, white below.

No obvious cranial or dental characters.

Measurements.—Type: total length 355; tail 164; hind foot 51. Skull of type: greatest length 55.5; zygomatic breadth 25.7; nasals 22.3×4.8 ; interorbital width 11.7; palatal foramina 5.5×3 ; upper toothrow 8.7.

Remarks.—Only two specimens of this form are in hand, essentially alike and so much paler, more cinnamomeous in color than *cayennensis* that their distinction seems certain. They are in unworn, apparently fresh pelage and much lighter than *cayennensis* even when it is very worn, with much of its usual black eliminated. Although considerably larger, their general appearance suggests *P. ochraceus*, the palest form known to me.

It is not improbable that this form may furnish connection between *cayennensis* and *longicaudatus* of northwestern Paraguay. However, a specimen in Field Museum from Urucum de Corumba, Matto Grosso, Brazil, assumed to be *longicaudatus*, is markedly grayish about the face, forelegs, and sides, indicating considerable difference.

A series in Field Museum from the Para region and lower Tocantins, representing *P. oris*, does not present any characters distinguishing from *cayennensis*. *P. goeldii* and *P. boimensis* from the lower Tapajos may also be synonyms. A specimen from Tauary, about 100 miles up the south bank of the Tapajos from Santarem, the type locality of *goeldii*, is exactly like *cayennensis* in color and no significant cranial or dental characters are evident. In describing *goeldii*, Thomas referred to an "indication" of five instead of four laminae in the second and third upper molars. This indication was doubtless a fourth enamel island such as is usually present in some western forms of *Proechimys* but has otherwise not been noted in eastern specimens. That it may occur as an abnormality is shown by a specimen of *cayennensis* from the Demerara River, British Guiana, where it is present at least in the third molar. Until more than one specimen showing it is received from the Tapajos region, therefore, its validity as a character may be doubted.

***Proechimys hendeei nigrofulvus* subsp. nov.**

Type from Montalvo, Rio Bobonaza, southeast of Sarayacu, eastern Ecuador. No. 41463 Field Museum of Natural History. Adult male. Collected February 18, 1932, by Ramon E. Olalla.

Diagnosis.—A long-tailed, soft-pelaged rat, with sharply contrasted, pure white under parts, richly rufescent sides and blackened back. Most similar to *P. hendeei* of northeastern Peru but much more rufescent in color. Differing from *P. semispinosus* and allies in color, simpler tooth pattern, and smaller palatal foramina; from *P. brevicauda* in color, longer tail, and smaller palatal foramina; from *P. hilda* in color and smaller size.

Characters.—Head and sides of body rich Ochraceous-Tawny; middle of back and head from nose to base of tail considerably blackened, forming an indefinite blackish dorsal stripe; under parts pure white to bases of hairs, in a few cases with the white area narrowed on the throat or with a slight extension of tawny from the throat continued all the way across; white of under parts continued as a well-defined line on the inner side of the hind legs to the feet and usually on the inner half of the feet to the toes; tail sharply bicolored, blackish brown above and whitish below; forefeet usually brownish on the outer side and whitish on the inner, thus connecting along the forearm with the white of the under parts.

General shape of skull rather narrow and elongated anteriorly, not heavily ridged; audital bullae small as compared to those of *semi-*

spinus and *brevicauda*; palatal foramina very short and without any well-defined median ridge at their posterior border; interpterygoid fossa narrow, its anterior boundaries usually forming a point which nearly or quite reaches the level of the middle of the second or penultimate molar. Molariform teeth in ordinary stages of wear with a simpler pattern than in *semispinosus* although not quite so simple as in *brevicauda*; three outer transverse enamel islands normally showing in each tooth plus an inner smaller one or a re-entrant angle; the posterior island often slightly bowed in shape and not fully parallel with the ones anterior to it; no trace of a small fourth island such as usually appears in *semispinosus* and its allies.

Measurements.—Average of six adults measured by the collector: total length 413 (400–450); tail vertebrae 188 (170–200); hind foot, with claws (dry) 50 (48–54). Skull of type: greatest length 55.7; zygomatic breadth 27.1; length of nasals 21.4; interorbital constriction 10.4; palatal foramina 3.7×2.2 ; length of audital bulla 10.8; upper toothrow (crowns) 8.

Remarks.—In a considerable collection of *Proechimys* in Field Museum this form stands out rather conspicuously on account of its rich color, pure white (not even slightly creamy) under parts, and long tail. An apparently valid and constant cranial character is the very short and unusually shaped palatal foramen. This is somewhat similar to that of *P. simonsi* of central Peru, which is otherwise quite different. Besides three specimens from Montalvo there are six others in Field Museum, one from Rio Capihuara, and five from Pindo Yacu, both on the drainage of the upper Rio Tigre.

The names proposed for *Proechimys* from Ecuador and adjoining parts of Peru are rather numerous and perhaps should be discussed separately.

Proechimys semispinosus Tomes 1860—Gualaquiza, Rio Santiago, Ecuador.

The type in the British Museum, a skull only, has not been examined in this connection and no topotypes are available, but, as judged by comparisons made with it by Thomas, its general characters are evident and the published figure can be assumed to be fairly accurate. The type locality, on the Rio Santiago in southern Ecuador, makes it probable that this form is closely allied to or identical with forms found on the Huallaga River into which the Rio Santiago drains. A series from Lagunas, Peru, near the junction of the Huallaga and Ucayali rivers has been assumed to represent it. A

character shown by the type, which has been emphasized by Thomas, is a so-called "parietal ridge" running across the parietals from the frontal to the interparietal. Such a ridge appears only on one of ten skulls from Lagunas and it may be doubted that the character is a constant one. If the specimens from Lagunas are correctly referred to *semispinosus*, they indicate that it is especially characterized by a somewhat more complicated tooth pattern than other species of the region. This is evidenced by a fourth indentation on the outer side of the three upper molars which produces a small subcircular enamel island behind the three horizontal islands which show at ordinary stages of wear.

Proechimys brevicauda Günther 1876—Chamicuros, Huallaga River, Peru.

A distinct species with dark feet and moderate tail; under parts, especially throat, largely fulvous. Molars with three outer enamel islands. Perhaps allied to *P. cayennensis*.

Proechimys semispinosus calidior Thomas 1911—San Javier, lower Cachavi River, near Concepcion, northwestern Ecuador.

Apparently a slight subspecies of *semispinosus* averaging somewhat darker in color; also allied to Central American forms. A topotype in Field Museum has the characteristic dentition and its skull shows fairly well-developed parietal ridges.

Proechimys gularis Thomas 1911—Canelos, Rio Bobonaza, Ecuador.

Specimens from the vicinity of the type locality are practically identical with some of the variations of typical *brevicauda*. It is, therefore, doubtful that the name should stand, even for a subspecies.

Proechimys hilda Thomas 1924—San Lorenzo, Rio Marañon, near mouth of Huallaga, Peru.

Without examination of the type, the affinities of this supposed species can scarcely be surmised. It exceeds all other described forms in size (head and body length 282; greatest length of skull 65) and is said to have "fairly long palatal foramina." It had no tail. The character of the pelage is not mentioned in the original description and the color as described appears to be much the same as in *semispinosus*. At least it may be concluded that it has no especial similarity to *hendeei*.

Proechimys hendeei Thomas 1926—Puca Tambo, fifty miles east of Chachapoyas, Peru. Altitude 5,100 feet.

As stated by Thomas, "this fine black Spiny-rat is remarkably distinct from all species hitherto described. Its scarcely spinous fur, blackish color, narrow muzzle, and other cranial characters separate it widely." A specimen collected by Hendee at Yambrasbamba, Peru, at an altitude of 6,500 feet, is now in Field Museum, received in exchange from the British Museum, and fully confirms the distinctness of the species.

Proechimys rattinus Thomas 1926—Tushemo, Masisea, Ucayali River, Peru. Altitude 1,000 feet.

Based on a single immature specimen without skull and an adult without skin. This is characterized by a wholly black tail and by the extension of the body color to the under parts. Apparently a lowland race or phase of *hendeei*.

Proechimys rosa Thomas 1900—Santa Rosa, Province of El Oro, southwestern Ecuador.

Apparently allied closely to *calidior* and the name is earlier.

Proechimys decumanus Thomas 1899—Chongon, Province of Guayas, western Ecuador.

Perhaps distinct, but coloration and western locale indicate no affinity to *hendeei*. The name is the earliest for a *Proechimys* from western Ecuador.

Proechimys simonsi Thomas 1900—Perene River at 800 feet altitude, Junín, Peru.

This is probably allied to *brevicauda*, from which it differs at least in immaculate white under parts.

Proechimys pachita Thomas 1923—Puerto Leguia, Rio Pachitea, Peru.

This is doubtfully separable from *simonsi*, although supposed to be distinguished by having longer palatal foramina. A series of nine in Field Museum from Tingo Maria, Peru, includes specimens which might be referred to either. The extremes are quite marked but there is considerable variation, the significance of which is not clear. At least until the group is thoroughly studied it would seem best to consider *pachita* a synonym of *simonsi*.

***Proechimys hendeei ellassopus* sp. nov.**

Type from Santo Domingo, Rio Inambari, Puno, Peru. Altitude 6,000 feet. No. 52617 Field Museum of Natural History. Adult male. Collected October 18, 1941, by Colin C. Sanborn. Orig. No. 2969.

Diagnosis.—A dark-colored (olivaceous and black) rat with moderately soft pelage, the middle of the back with stiffened hispid hair, not heavily spinous; feet slender and wholly dark-colored; tail of moderate length. Skull depressed above the orbit, and orbit unusually small.

Characters.—General color of sides, head, and rump finely mixed blackish and cinnamomeous, producing a general effect of Bister brown; middle of back heavily blackish; under parts pure white to roots of hairs; fore and hind feet entirely brown (Fuscous of Ridgway), toes pale; lower leg fuscous all around; tail bicolored, fuscous above, pale whitish below. Immatures are wholly blackish brown above and white below.

Skull rather lightly built, with few ridges and angles; supraorbital border sharp-edged with only slight development of beads; audital bullae small; palatal foramina moderately long and lyre-shaped; interpterygoid fossa V-shaped, reaching to level of hinder edge of penultimate molar; cheekteeth with three nearly parallel enamel islands and no trace of a fourth.

Measurements.—Type and female paratype: total length 387, 364; tail 158, 147; hind foot 47, 45. Skull of type: greatest length 54.1; zygomatic breadth 25.3; length of nasals 20.6; interorbital breadth 11.1; palatal foramina 5.9×2.5 ; length of audital bulla 11; greatest width of orbit (supraorbital edge to upper edge of zygoma) 8.6; greatest length of orbit (front of orbit to front of glenoid fossa) 11.4.

Remarks.—This rat with its dark color and its slender feet is obviously very distinct from the coarser-pelaged, broad-footed and generally rufous rats of the *cayennensis* group, which are found mostly at lower altitudes. It requires some assumption to allocate it as a subspecies of *hendeei*, but it agrees in general characters with that species and that it grades into it is a more probable hypothesis than that it does not. It is lighter and less uniformly colored than *hendeei*, although its feet are conspicuously darker. Its tail is shorter and its general size less. Its skull is especially characterized by a very small orbit not seen in any other species of the genus. This character is not mentioned in the original description of *hendeei*, and material

representing typical *hendeei* is not sufficiently available to warrant conclusions.

Proechimys steerei, from the upper Purus River, has no close relationship, since it is a broad-footed, rufous rat with a heavily beaded skull and dentition in which traces of a fourth enamel island are evident in the first and second molars. One skin and four skulls of *steerei*, kindly lent by the United States National Museum, have been examined.

Five skins in Field Museum from "El Palmar," at 160 meters altitude, Province of Chapare, Bolivia, may be related more closely. Although much more rufescent than *elassopus*, they have uniformly dark-colored and slender feet. Unfortunately they are accompanied by only one fragmentary skull, but in this the imperfect orbit appears relatively small.

Specimens from the Inambari region recorded by J. A. Allen (Bull. Amer. Mus. Nat. Hist., 13, p. 222, 1900; 14, p. 42, 1901) as *Proechimys simonsi* have not been examined.



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